

NEW SPECIES OF VERNONIA FROM BOLIVIA AND PERU
(VERNONIEAE: ASTERACEAE)

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The following two new species have been discovered in undetermined material of Asteraceae from Bolivia and Peru.

Vernonia fournetii H. Robinson and B. Kahn, sp. nov.
Plantae suffrutescentes ad 1 m altae laxe ramosae. Caules pentangularis dense breviter hirtelli et tomentelli. Folia alterna, petiolis brevibus ca. 8-10 mm longis; laminæ oblongo-ellipticae 10-12 cm longæ et 1.4-3.5 cm latae base rotundatae margine integrae vix recurvatae apice breviter acutæ supra et subtus strigosæ in nervis prominentibus dense sericeæ, nervis secundariis pinnatis utrinque ca. 12 patentibus sensim ascendentiter arcuatæ. Inflorescentiae abrupte late scorpioideæ cymosæ bracteiferae; bracteæ foliiformes sed minores 10-40 mm longæ et 6-14 mm latae. Capitula in axillis bracteorum solitaria sessilia ca. 12 mm alta; squamae involucri ca. 30-35 subimbricatae ca. 4-seriatæ graduatae oblongo-ovatae vel oblongo-lanceolatae 1-5 mm longæ et 1.0-1.5 mm latae apice late vel anguste rotundatae planæ extus dense sericeæ vel subtomentellaæ. Flores 20-25 in capitulo. Corollæ lavandulæ ca. 10 mm longæ leniter carnosæ extus glabrae, tubis 4.5 mm longis infundibularibus, fauibus 0.75 mm longis, lobis linearibus ca. 4.75 mm longis et 0.7 mm latis apice extus minime armatis; filamenta in partibus inferioribus reflexa superioribus ca. 0.7 mm longa; thecae 4.1-4.2 mm longæ; appendices antherarum lavandulæ acutæ 0.9-1.0 mm longæ et 0.25 mm latae glabrae; basi stylorum disciformes noduliferi; scapi stylorum in partibus hispidulæ superioribus ca. 0.7 mm longi; rami stylorum ca. 3 mm longi. Achaenia ca. 1.8 mm longa dense sericeo-setulifera base glandulifera; carpopodia turbinata ca. 0.3 mm alta et 0.5 mm lata; setae pappi albae subdeciduae ca. 37 plerumque 6.0-6.5 mm longæ apice leniter latiores in sereibus exterioribus palaceæ ad 1 mm longæ et 0.2 mm latae. Grana pollinis in diametro ca. 55-60 μm valde lophor-

ata, cristis altis minute multo spiculiferis, spinis majoribus nullis, reticulatis a *V. geminatis* similis.

TYPE: BOLIVIA: La Paz: Route de Coroico, km 64, alt. 2650 m. Herbacée de 1 m de haut en buisson. Feuilles alternes de 10-12 cm de long, acuminées, pétiole de 8-10 mm de long. Fleurs mauves en racème, cauiflores. 2/8/1984. A. Fournet A. E. 429 (Holotype, US; isotype, IBBA)

The new species apparently belongs to the *Vernonia salzmannii* alliance on the basis of the cymose bractiferous inflorescence and the pollen. The new species differs from *V. salzmannii* DC. by the blunter, less numerous involucral bracts and the much more densely pubescent stems and involucre. Actually, the new species is most obviously distinct by the more abrupt differentiation of the inflorescence. Perhaps the closest relationship of *V. fournetii* is to *V. tarijensis* (Griseb.) Hieron. of northern Argentina, but the latter has more tapered narrowly acute leaves and has narrowly acute, lanceolate involucral bracts.

***Vernonia sandemanii* H. Robinson and B. Kahn, sp. nov.**

Plantae fruticosae ad 3.3 m altae. Caules brunnescentes teretes striati vix angulati appresse irregulariter pilosuli et sparse glandulo-punctati. Folia alterna, petiolis 1-3 mm longis; laminae papyraceae ellipticae plerumque 7-9 cm longae et 1.5-2.7 cm latae base late cuneatae margine superne sensim breviter serratae apice breviter acuminatae supra nitidae plerumque sparse pilosulae in nervis primariis densius pilosulae in nervis et nervulis insculptae subtus breviter luteo-sericeae inter nervos et nervules majores vadose appresse albo-tomentosae, nervis secundariis pinnatis utrinque 5-6 valde ascendentibus. Inflorescentiae in ramis terminales laxe ramosae in ramis dense corymbosae in ramulis dense glomerulæ, ramis dense luteo-sericeis, bracteis foliaceis solum in nodis primariis inferioribus presentibus. Capitula in glomerulæ sessilia cylindracea 10-12 mm alta et 2-3 mm lata; squamae involucratae 15 imbricatae ca. 4-5-seriatae valde inaequales 1.5-5.0 mm longae et ca. 1 mm latae apice generaliter rotundatae sed in maturitatis eroso-fissae extus in partibus non imbricatis purpureae, squamae exteriores ovatae extus subtomentellæ, squamae interiores facile deciduae lineares vel anguste ellipticae extus plerumque glabrae superne leniter appresse puberulae. Flores 1 in capitulo. Corollæ violaceæ ca. 8 mm longae, tubis anguste cylindraceis 3.5-4.0 mm longis extus breviter stipitato-glanduliferis, faucibus nullis, lobis 5 profunde divisis linearibus 4.0-4.5 mm

longis et 0.7 mm latis extus apice in aggregis discretis dense glanduliferis caetera persparse glandulo-punctatis; filamenta in parte superiore ca. 0.6 mm longa; thecae ca. 1.3 mm longae base papilloso-fimbriatae; appendices apicales antherarum oblongae ca. 0.5 mm longae et 0.27 mm latae apice rotundatae glabrae; nodi stylorum distincti breviter cylindracei; scapi stylorum in partibus superioribus hispidulis 0.5-1.0 mm longi, pili apice rotundati. Achaenia submatura ca. 2 mm longa distincte 10-costata in costis breviter setulifera inter costas glandulo-punctatis; carpopodia breviter subcylindrica ca. 0.1 mm alta et 0.4 mm lata; setae pappi persistentes albae ca. 65 plerumque ca. 7 mm longae et apice anguste clavatae, setae paucae exteriores breviores et apice tenuiores. Grana pollinis in diametro ca. 45 um irregulariter areolata et spinulosa (Lynchophora-type).

TYPE: PERU: Huanuco: Carpish (above Huanuco), the rain forest, growing in semi-shade. Alt. 8500 ft. 8-10 ft. shrub with bright-heliotrope flowers. June 1938. C. Sandeman 219 (Holotype BM).

The new species seems most closely related to Vernonia flexipappa Gleason of southern Ecuador and to Eremanthus jelskii Hieron. of northern Peru which has recently been renamed as V. shannensis by MacLeish (1984). All have single-flowered heads. The three species superficially resemble Critoniopsis which has few-flowered heads with easily deciduous inner involucral bracts (Robinson 1980), but they differ by the lobes of the corolla being divided to the base of the throat and by the achenes being distinctly 10-ribbed with glands and setulae. The blunt hairs of the style branches are also like the subtribe Piptocarphinae to which Critoniopsis belongs (Robinson et al. 1980), but the achenes are not smooth and nearly glabrous as in members of that subtribe. The present group seems to hold a relationship to Critoniopsis similar to that of another northern Andean group noted by Robinson (1980). The latter group contains V. crassilanata Cuatr., V. neoleasoniana Cuatr., V. sparrei H. Robinson, and V. trichotoma, having corollas deeply lobed like in the present group but with more numerous flowers in the heads and with opposite leaves.

Vernonia sandemanii is like the Ecuadorian V. flexipappa in the more congested pappus with distinctly more than one row of long setae and with the lower leaf surfaces thinly pale-tomentose and yellowish pilose. The Ecuadorian species differs by the pale involucral bracts and the leaves broadest at or below the middle with less toothed often narrowly

recurved margins and less prominent veins on the lower surface. *Vernonia shaynensis* is a more densely leaved shrub with denser, more abrupt inflorescences, more shortly petiolate leaves with somewhat recurved margins, more sharply pointed involucral bracts, and with the pappus less congested and scarcely more than uniserrate.

The new species helps clarify the nature of a small group distributed from southern Ecuador to central Peru which had previously been known from only two species that were not recognized as close relatives of each other.

Literature Cited

- MacLeish, N. F. F. 1984. Eight new combinations in *Vernonia* (Compositae: Vernonieae). Systematic Botany 9: 133-136.
- Robinson, H. 1980. Re-establishment of the genus *Critoniopsis* (Vernonieae: Asteraceae). Phytologia 46: 437-442.
- Robinson, H., F. Bohlmann, and R. M. King. 1980. Chemosystematic notes on the Asteraceae. III. Natural subdivisions of the Vernonieae. Phytologia 46: 421-436.

10 HERBIER ORSTOM-IBBA LA 32
CP 824-LAMBERTON, 10 km S. IBBALA
11 N° _____
date 2/8/1964
12 FAMILLE CORTULACEAE
13: _____
14: _____
15: _____



16: L'ARBRE EST EN , km E4-A21:2(50)
17: L'ARBRE EST EN buisson.
Feuilles alternées, lvs 10-12cm de
long, pinnatifides, pétiole c. 10mm de
long.
Fleurs sauvages en racème, caulinif. rres.

Vernonia founetii H. Robinson & B. Kahn

Holotype

Collection A. POURRET Det:

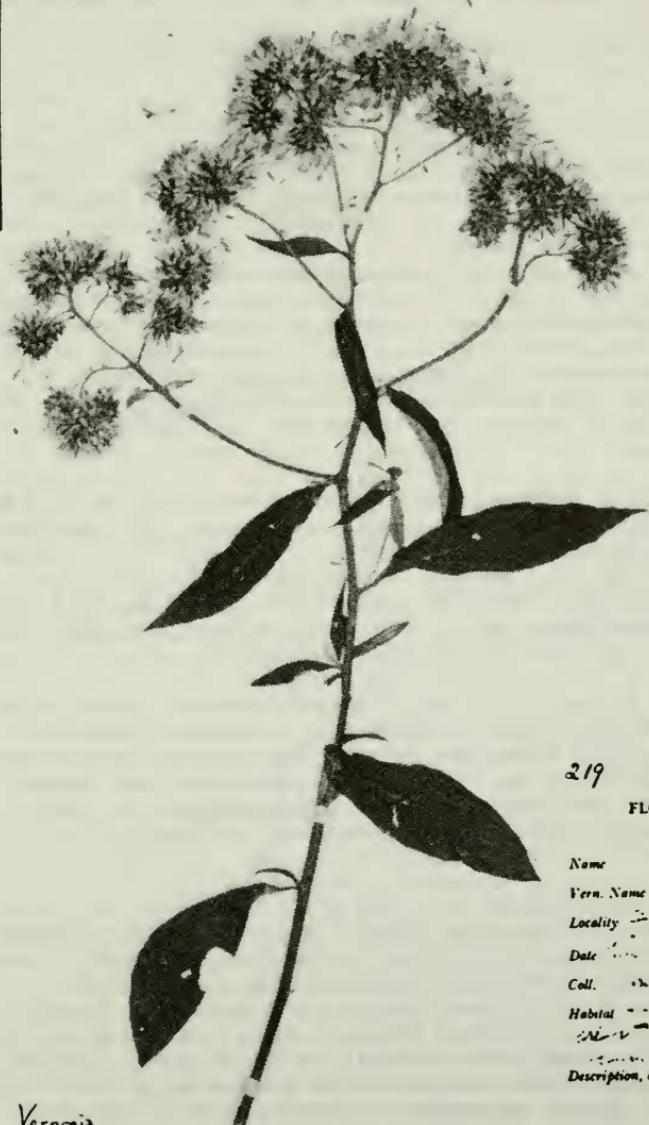


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Vernonia founetii H. Robinson & B. Kahn, Holotype, United States National Herbarium. Photos by Victor E. Krantz, Staff Photographer, National Museum of Natural History.



Vernonia

Name

Vern. Name

Locality [unclear] near [unclear]

Date [unclear] Altitude [unclear] m.

Coll. [unclear] and [unclear]

Habitat [unclear] [unclear] [unclear]

[unclear] [unclear] [unclear]

[unclear] [unclear] [unclear]

Description, etc. [unclear] [unclear]

219
FLORA OF P-24

No.

Economics

Vernonia sandemanii H. Robinson & B. Kahn,
Holotype, British Museum (Natural History).